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EXAMINER
MOORE, IAN N

ART UNIT	PAPER NUMBER
2661	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	09/771,205	HOLUR ET AL.
	Examiner	Art Unit
	Ian N Moore	2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-55_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-55_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

    1. ☐ Certified copies of the priority documents have been received.

    2. ☐ Certified copies of the priority documents have been received in Application No. _____.

    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
       application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _5_.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because there are some minor typographical errors. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

   - FIG. 4A, step 300, "SAM" should be "ASM" since it refers to Agent Solicitation Message.

   - FIG. 4B, step 342, "MATH"

Specification

2. The abstract of the disclosure is objected to because it does not describe the disclosure <u>sufficiently</u> to assist readers in deciding whether there is a need for consulting the full patent text for details. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. The abstract should. Correction is required. See MPEP § 608.01(b).

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

   The following title is suggested: **Method and system for label edge routing between a mobile unit and servicing node in a wireless network.**

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claims 1-3, 11-13, 21-23 and 31-33 are rejected under 35 U.S.C. 102(e) as being anticipated

by Rinne (U.S. 6,711,141).

Regarding Claims 1, 11, 21, and 31, Rinne'141 discloses a mobile unit (**see FIG. 1**

and FIG. 2, a protocol architecture of a mobile unit) operable to provide label edge

routing in a wireless network (**see FIG. 1, UMTS packet radio network**) comprising:

a service access manager (**see FIG. 2, QMOC, Quality Management &**

Optimization Control with a service control functionality means) operable to receive a

flow between an application of the mobile unit (**see FIG. 2, Setup Applications, E-mail,**

WWW, Multimedia Conferencing, FTP, and WAP of the mobile station) and a serving

node (**see FIG. 1, the combined system of RNC and SGSN; see col. 5, lines 1-10, see col.**

3, lines 51-60; note that when the application is started, QMOC

operates/functions/manages to receive the data flow between the applications layer and

the combined system RNC and SGSN);

the flow comprising an outbound flow from the application (**see FIG. 3 step 30 and**

see FIG. 4, step 40; note that the data flow is the flow destined towards the network side

from the applications) and an inbound flow from the serving node (see **FIG. 3, step 36 and**

see FIG. 4, step 44; see col. 5, lines 1-30; note that the data flow is the classified flow

to/from the network side (i.e. the combined system of RNC and SGSN))

a flow classifier (**see FIG. 2, the combined system of QMOC and Classifier PAC**)

operable to classify the flow (**see FIG. 3, steps 31-32 and see FIG. 4, steps 41-44; col. 5,**

lines 3-14, col. 6, lines 45-51; note that QMOC defines/classifies the QoS to the different

data flow, and the PAC also classifies/sort the data flow based on the code point/label in

DSCP field (i.e. flow label) and addresses); and

a forwarding information base (**see FIG. 2, Classifier PAC**) operable to store flow

labels (**see col. 6, lines 25-32; note that the flow label is the code point/label of DS filed in**

(i.e. DSCP field) in the TOS in IPv4 or traffic class/flow label field in IPv6 header) for

the flow classifier (**see col. 6, lines 38-48; note that the PAC classifier maintains/stores**

the code points/label and their corresponding traffic flow/profiles, for the combined

system of QMOC and Classifier PAC).

Regarding Claims 2, 12, 22, and 32, Rinne'141 discloses the outbound flow

comprising a plurality of outbound packets (**see col. 4, lines 60-65, see col. 6, lines 49-52;**

note that each output/outbound flow comprises the packets), comprising:

means for adding at the mobile unit an outbound label stack to each of the outbound

packets (**see FIG. 2, IPe; FIG. 3, step 33 and see FIG. 4, step 42, see col. 6, lines 39-50;**

61-67; note that QMOC instructs IPe to add/form an IP header stack by filling/adding a

DSCP label field in each output/outbound packet),

means for the outbound label stack based on the classification of the flow and

comprising at least one label (**see FIG. 3, steps 31-32 and see FIG. 4, steps 41-44; col. 5,**

lines 3-14, col. 6, lines 45-51; 60-67; note that IP header stack comprises a DSCP field,

and DSCP code/label defines/classifies the QoS to the different data flow); and

means for forwarding the outbound packets to the serving node (**see FIG. 2, RLC,**

MAC and L1; see FIG. 1, the combined system of RNC and SGSN; see col. 5, lines 1-10,

see col. 3, lines 51-60; note that the outbound packets must forward to the RNC and

SGSN).

Regarding Claims 3, 13, 23 and 33, Rinne'141 discloses storing at the mobile unit

flow labels for a plurality of applications of the mobile unit (**see col. 6, lines 43-50; note that**

classifier PAC maintains/stores 16 different alternatives of QoS DSCP labels for various

QoS profiles of applications); and

classifying the flow comprising determining flow characteristics for the flow (**col. 5,**

lines 3-14, col. 6, lines 45-51; note that QMOC determines/classifies the QoS

characteristics of the different data flow) and a flow label for the flow (**see col. 6, lines 40-**

42, 49-51; 60-67; note that a DSCP code/label is determined/classified based upon the

desired QoS), the flow label comprising one of the stored flow labels (**see col. 6, lines 43-**

50; note that a DSCP must comprise one of sixteen maintained/stored DSCP

codes/labels.)

5. Claim 41-42, 44-47, 49-52, and 54-55 are rejected under 35 U.S.C. 102(e) as being

anticipated by Mikkonen (U.S. 6,587,457).

Regarding Claims 41, 46, and 51, Mikkonen'457 discloses a system **(see FIG. 4B, a**

combined system of Mobile terminal MT, Access Point AP 4, and mobile IP router 5)

operable to provide label edge routing in a wireless network **(see FIG. 4b and 2, the**

combined network of Radio access network 2 and core network 3) comprising:

means for receiving at the serving node **(see FIG. 4B, AP node)** an outbound flow

(see FIG. 4B, a series/flow of radio data/packets 405) from a mobile unit **(see FIG. 4B,**

MT); see col. 9, lines 45-52; see col. 9, lines 30-32; note that AP node transmits/receives

a series/flow of radio data packets 405 to/from the mobile terminal (i.e.

inbound/outbound flow));

the outbound flow comprising a plurality of outbound packets **(see col. 4, lines 65 to**

col. 5, lines 5; note that the IP flow label added to the packets in order to define which

packets of IP flow and radio flow belong to the same flow. Thus, it is clear that a

series/flow (i.e. either inbound or outbound) of packets comprises a plurality of

packets),

each of the outbound packets **(see FIG. 4B; a radio data/packet 405)** comprising an

outbound label stack comprising at least one label **(see FIG. 4B, RFID; see col. 9, lines 30-**

31, 45-48; note that each radio packet contains a radio flow label);

the outbound label stack added outbound packets by the mobile unit **(see FIG. 4B,**

RFID 405; see col. 9, lines 30-31, 45-55; note that RFID is added by layer 2 to each

outbound packet by the mobile before it transmits towards the AP node); and

means for forwarding the outbound packets to the network based on the outbound label stacks (see FIG. 4B, stages 405, 408 and 407; col. 7, lines 36-51; note that the AP node examines the IP flow label IPTAG of the inbound/outbound packets received/transmitted from/to the mobile IP router 5, and the radio flow label RFID corresponding to IPTAG is retrieved, then the packets (stacks 407 and 408) are routed to/from mobile IP router based upon IP flow label IPTAG.)

Regarding Claims 42, 47, and 52, Mikkonen'457 disclose means for performing at the serving node a label swap (**see FIG. 4B, label 405 is swapped/switched to IP TAG at layer 2**) for the outbound packets prior to forwarding the outbound packets to the network (**see FIG. 4B, label 408, IPTAG and 407 is transmitted/received to/from Mobile IP router via Ethernet; col. 7, lines 36-51; note that the AP node examines the IP flow label IPTAG of the inbound/outbound packets received/transmitted from/to the mobile IP router 5, and the radio flow label RFID corresponding to IPTAG is retrieved. Then after RFID label is switched/swapped to the IPTAG label, and then the packets (stacks 407 and 408) are routed to/from mobile IP router based upon IP flow label IPTAG.**)

Regarding Claims 44, 49, and 54, Mikkonen'457 disclose means for receiving at the network inbound packets for the application (**see FIG. 4B, IP flow 406 is received at the Mobile IP router 5 from the network; see col. 7, lines 31-37, see col. 10, lines 21-40**);

means for adding an inbound label stack comprising at least one label to each of the inbound packets at the network (**see FIG. 4B, IPTAG label is added/encapsulated before sending towards AP 4; see col. 9, lines 34-38, see col. 10, lines 1-6**); and

means for forwarding the inbound packets from the network to the serving node (**see FIG. 4B, the packets IPTAG label is routed/forward towards AP 4; see col. 9, lines 35-43**).

Regarding Claims 45, 50, and 55, Mikkonen'457 disclose means for performing at the serving node a label swap for the inbound packets (**see FIG. 4B, AP node 4 performs label switching/swapping/bridging between IPTAG label (i.e. removing IPTAG label) and RFID label (i.e. adding corresponding RFID label) for each received packet since they correspond to each other; see col. 9, lines 40-46**); and

means for forwarding the inbound packets from the serving node to the mobile unit (**see FIG. 6B, AP node 4 forms a packet 405 for the radio flow by adding RFID label and transmits to the mobile terminal MT; see col. 9, lines 46-50**).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim 4-5, 14-15, and 24-25 and 34-35 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Rinne'141 in view of Mikkonen'457.

Regarding claims 4, 14, 24 and 34, Rinne'141 discloses storing at the mobile unit

the flow characteristics for the flow, maintains/stores the different types/alternatives of flow,

the flow label for the flow; receiving at the mobile unit the flow, the flow comprising a

pluralities of packets, the packets each comprising an label stack comprising at least one

label; and the store flow label for the flow as described above in claims 1-3, 11-13, 21-24 and

31-33 above.

Rinne'141 does not explicitly disclose receiving inbound packet flow from the serving

node, determined flow characteristic for the flow, retrieving at the mobile unit the stored flow

characters for the flow and flow label for the flow.

However, the above-mentioned claimed limitations are taught by Mikkonen'457. In

particular, Mikkonen'457 teaches an inbound flow from the serving node (**see FIG. 4B, AP**

node), the method further comprising:

the mobile unit the determined flow characteristics for the flow and the determined

flow label for the flow (**see FIG. 6b, MT; see col. 7, lines 51-56; note that the mobile**

terminal determines/examines the radio flow characteristics/feature for the flow and

determines/examines radio flow label for the flow);

receiving at the mobile unit the inbound flow (**see FIG. 4B, MT); see col. 9, lines 45-**

52; see col. 9, lines 30-32; note that AP node transmits a series/flow of radio data

packets 405 towards the mobile terminal (i.e. inbound flow), the inbound packets each

comprising an inbound label stack comprising at least one label (**see FIG. 4B, RFID; see col.
9, lines 30-31, 45-48; note that each radio packet contains a radio flow label**); and

retrieving at the mobile unit the stored flow characteristics for the flow and stored
flow label for the flow (**see col. 7, lines 50-55; note that the mobile terminal retrieves
IPVS from the switching table and IP flow characteristics stored in the wireless
terminal.**).

In view of this, having the system of Rinne'141 and then given the teaching of
Mikkonen'457, it would have been obvious to one having ordinary skill in the art at the time
the invention was made to modify the system of Rinne'141, for the purpose of providing
inbound packet processing at the mobile terminal, as taught by Mikkonen'457, since
Mikkonen'4576 states the advantages/benefits at col. 5, lines 2-13 that it would provide
accelerated transmission of packets because time-consuming routing in the network layer can
be voiced at the access point since the mobile terminal processes a label. The motivation
being that by providing a mobile terminal with label processing functionality, it can reduce
the route processing time or delay at the access point node.

Regarding claims 5, 15, 25, and 35, the combined system of Rinne'141 and
Mikkonen'457 discloses the mobile unit, inbound label stack as described above in claims
4,14,24, and 34. Furthermore, Mikkonen'457 discloses removing at the mobile unit the
inbound label stack from each of the inbound packets (**see FIG. 4b, note at RFID 405 is
removed at Layer 2**); and

forwarding the inbound packets to the application (see **FIG. 4B, IP flow 406 is**

forwarded to layer 3 (i.e. the application); see col. 9, line 30-34).

Therefore, it would have been obvious to one having ordinary skill in the art at the

time the invention was made to modify the system of Rinne'141 as taught by Mikkonen'457

for the same reason stated in Claims 4,14,24 and 34 above.

7. Claim 6-7, 16-17, 26-27, and 36-37 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Rinne'141 in view of Gibson (U.S. 6,680,943).

Regarding claims 6, 16, 26, and 36, Rinne'141 discloses the mobile unit with a label

for the application as described above in claims 1, 11, 21 and 31 above. Rinne'141 further

discloses means for determining at the mobile unit flow characteristics (**col. 5, lines 3-14,**

col. 6, lines 45-51; note that QMOC determines/classifies the QoS characteristics of the

different data flow) and a flow label for the flow (see col. 6, lines 40-42, 49-51; 60-67; note

that a DSCP code/label is determined/classified based upon the desired QoS),

the flow label comprising one of the labels (**see col. 6, lines 43-50; note that a DSCP**

must comprise one of sixteen DSCP codes/labels.); and

means for storing at the mobile unit the flow characteristics and the flow label for the

flow (**see col. 6, lines 43-50; note that classifier PAC maintains/stores 16 different QoS**

characteristics of the flows and DSCP labels for various QoS profiles of applications);.

Rinne'141 does not explicitly disclose means for generating at the mobile unit a label

request; means for receiving at the mobile unit a label response based on the label request,

the label response comprising at least one label.

However, the above-mentioned claimed limitations are taught by Gibson'943. In

particular, MGibson'943 teaches means for generating a label request for the application (**see**

FIG. 9, LSR 909 generates a label request message (LRM) 901 for the data transmission

application; see col. 23, lines 30-35; also see FIG. 11, CR-LDP setup request message at

EP 1202 and AM 1203);

means for receiving a label response based on the label request (**see FIG. 9, LSR 909**

receives a label response/mapping message (LMM) 907 in reply to request message; see

col. 23, lines 48-52; also see FIG. 12, 200 OK response message at EP 1202 and AM

1203),

the label response comprising at least one label (**see FIG. 9, LMM 907 reply**

message contains at least one label (i.e. label 1-3); see col. 23, lines 48-53);

means for determining the flow characteristics and a flow label for the flow (**see col.**

23, lines 14-22; note that since CR-LDP protocol which established labeled flow in the

MPLS network, it is clear that the flow characteristic/QoS and flow label must be

determined based upon traffic engineering method);

the flow label comprising one of the labels in the label response (**see col. 23, lines 23-**

29; 48-52; note that since CR-LDP protocol is used, the received reply message label

must be one of the flow label); and

Means for storing the flow characteristics and the flow label for the flow (**see FIG. 9,**

the routing table 908; see col. 23, lines 54-55; note that the LSR stores/adds the flow

characteristic/QoS and flow label in the routing table).

In view of this, having the system of Rinne'141 and then given the teaching of

Gibson'943, it would have been obvious to one having ordinary skill in the art at the time the

invention was made to modify the system of Rinne'141, for the purpose of providing label

request and response mechanism to a node, as taught by Gibson'943, since Gibson'943 states

the advantages/benefits at col. 2, lines 29-40, col. 3, lines 27-34, col. 23, lines 17-22, col. 31,

lines 25-30 that it would provide advantage transmission of real time Internet messages over

the MPLS network with guaranteed QoS traffic, and it also allows traffic engineering method

to be applied to the MPLS network such that specific paths can be established through a set

of chosen nodes with a particular QoS. The motivation being that by utilizing the label

requesting/receiving mechanism, it can increase QoS provided to each traffic flow since a

specific path is established with a particular QoS.

Regarding claims 7, 17, 27 and 37, the combined system Rinne'141 and Gibson'943

discloses label responses as discloses above in claims 6, 16, 26 and 36. Gibson'943 discloses

the label response based on a label allocation performed at a label server **(the combined**

system of admission manager (AM) 1204 (see FIG. 11) and Administration Server 35

(see FIG. 1)), the label server coupled to the network **(see FIG. 1 and 11, the combined**

system is coupled to the MPLS network); see col. 6, lines 58-65, see col. 8, lines 42-55)

Therefore, it would have been obvious to one having ordinary skill in the art at the

time the invention was made to modify the system of Rinne'141 as taught by Gibson'943 for

the same reason stated in Claims 6,16,26, and 36 above.

8. Claims 8-9, 18-19, 28-29, and 38-39 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Rinne'141, Gibson'943, Ton (U.S. 2002/0067704 A1) as applied to claim

6, 16, 26, and 16 above, and further in view of well established teaching in art.

Regarding claim 8, 18, 28 and 38, the combined system of Rinne'141 and

Gibson'943 disclose means for generating a label request as described above in claims 6, 16,

26 and 36 above.

Neither Rinne'141 nor Gibson'943 explicitly discloses the mobile unit generating an agent

solicitation message **(see Ton'704, see page 1, paragraph 10; note that mobile unit with**

mobile IP protocol transmits the agent solicitation message).

However, the above-mentioned claimed limitations are taught by Ton'704. In view of

this, having the combined system of Rinne'141 and Ton'704, then given the teaching of

Ton'704, it would have been obvious to one having ordinary skill in the art at the time the

invention was made to modify the combined system of Rinne'141 and Ton'704, for the

purpose of the mobile unit sending ASM message, as taught by Ton'704, since Ton'704 states

the advantages/benefits at see page 1, paragraph 10 that it would provide a mechanism to

determine whether it is on its home network or a foreign network. The motivation being that

by sending ASM, it can increase the traffic transmission reliability and connection

management accuracy by ensuring its connections to the agent.

Neither Rinne'141 nor Gibson'943 explicitly discloses the agent solicitation message

comprising a vendor-specific extension, the vendor-specific extension comprising the label

request **(per well established teaching in art, the agent solicitation message (ASM) is**

utilized according per Mobile IP (MIP) protocol. It is well known in that art that, a

heart beat message (i.e. ASM) format can be modified to include

carrier/vendor/supplier-specific proprietary extension in order to carry the label

request.)

However, the above-mentioned claimed limitations are taught by well-established

teaching in art. In view of this, having the combined system of Rinne'141, Gibson'943 and

Ton'704, then given the teaching of well established teaching in art, it would have been

obvious to one having ordinary skill in the art at the time the invention was made to modify

the combined system of Rinne'141, Gibson'943 and Ton'704, for the purpose of providing a

vendor/supplier specific extension in the ASM message, as taught by well established

teaching in art. The motivation being that by utilizing a carrier/supplier/vendor-specific

extension field, it can increase the QoS and provide extra reliability for each subscriber in

addition to the standard means.

Regarding claim 9, 19, 29 and 39, the combined system of Rinne'141 and

Gibson'943 disclose means for receiving a label response as described above in claims 6, 16,

26 and 36 above. Gibson'943 discloses receiving/generation an advertisement message (see

col. 13, lines 35-40, 20-26; see col. 11, lines 44-49; see col. 10, lines 32-39).

Neither Rinne'141 nor Gibson'943 explicitly discloses the mobile unit receiving an agent

advertisement message **(see Ton'704, see page 1, paragraph 10; note that mobile unit**

with mobile IP protocol receives the agent advertisement message (AAM)).

However, the above-mentioned claimed limitations are taught by Ton'704. In view of

this, having the combined system of Rinne'141 and Ton'704, then given the teaching of

Ton'704, it would have been obvious to one having ordinary skill in the art at the time the

invention was made to modify the combined system of Rinne'141 and Ton'704, for the

purpose of the mobile unit sending AAM message, as taught by Ton'704, since Ton'704

states the advantages/benefits at see page 1, paragraph 10 that it would provide a mechanism

to determine whether it is on its home network or a foreign network. The motivation being

that by receiving AAM, it can increase the traffic transmission reliability and connection

management accuracy by ensuring its connections to the agent.

Neither Rinne'141 nor Gibson'943 explicitly discloses the agent advertisement message

comprising a vendor-specific extension, the vendor-specific extension comprising the label

responses (**per well established teaching in art, the agent advertisement message is**

utilized according per Mobile IP (MIP) protocol. It is well known in that art that, a

heart beat message (i.e. AAM) format can be modified to include

carrier/vendor/supplier-specific proprietary extension in order to carry the label

response.)

However, the above-mentioned claimed limitations are taught by well-established

teaching in art. In view of this, having the combined system of Rinne'141, Gibson'943 and

Ton'704, then given the teaching of well established teaching in art, it would have been

obvious to one having ordinary skill in the art at the time the invention was made to modify

the combined system of Rinne'141, Gibson'943 and Ton'704, for the purpose of providing a

vendor/supplier specific extension in the AAM message, as taught by well established

teaching in art. The motivation being that by utilizing a carrier/supplier/vendor-specific

extension field, it can increase the QoS and provide extra reliability for each subscriber in addition to the standard means.

9. Claims 10, 20,30 and 40 rejected under 35 U.S.C. 103(a) as being unpatentable over Rinne'141 and Gibson'943, as applied to claim 6, 16, 26, and 16 above, and further in view of well established teaching in art.

Regarding claim 10, 20, 30 and 40, the combined system of Rinne'141 and Gibson'943 disclose the mobile unit supports label switching; and the serving node supports label switching as described above in 6, 16, 26, and 16.

Neither Rinne'141 nor Gibson'943 explicitly discloses determining at the mobile unit whether the mobile unit supports label switching; and determining at the mobile unit whether the serving node supports label switching (**per well established teaching in art, it is well known that one skill in ordinary art must determine whether the mobile unit supports label switching and the serving node supports label switching before performing a label switching in order to avoid incompatibilities between two systems**).

However, the above-mentioned claimed limitations are taught by well-established teaching in art. In view of this, having the combined system of Rinne'141 and Gibson'943, then given the teaching of well established teaching in art, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Rinne'141 and Gibson'943, for the purpose of providing a mechanism to determine whether the mobile unit and the support node supports a label switching, as taught by well established teaching in art. The motivation being that by determining whether both mobile

unit and the support node support a label switching before performing the label switching, it

can avoid any potential failure due to incompatibilities between two systems.

10. Claims 43, 48 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Mikkonen'457 in view of well-established teaching in art.

Regarding Claims 43, 48, and 53, Mikkonen'457 disclose receiving the outbound

label stack from the outbound packets at the network **(see FIG. 4B, Mobile IP router 5**

receives/transmits the outbound label 408 and IP TAG from the AP via the network;

see col. 9, lines 16-24, 30-35, 54-59; see col. 10, lines 21-40; note that the mobile IP

router is coupled to the network, and it routes the packets between to/from the AP

from/to the another Internet terminal.)

Mikkonen'457 does not explicitly disclose means for removing the outbound label

stack from the outbound packets **(Per well established teaching in art, it is well known in**

the art the label must be stripped/removed/de-encapsulated at the end/existing router

before existing the network); and

means for forwarding the outbound packets to a specified destination **(Per well**

established teaching in art, it is well known in the art the router (i.e. Mikkonen'457's IP

router must route the packets to its destination specified by the IP header (see FIG. 4B,

IP header 407) after the label is removed/de-encapsulated).

However, the above-mentioned claimed limitations are taught by well-established

teaching in art. In view of this, having the system of Mikkonen'457 and then given the

teaching of well established teaching in art, it would have been obvious to one having

ordinary skill in the art at the time the invention was made to modify the system of

Mikkonen'457, for the purpose of providing a well known labeled/tunnel switching and IP

routing, as taught by well established teaching in art. The motivation being that by removing

the label of the packet only at the existing router and routing toward the destination, it can

increase the end-to-end reliability of the packet transmission.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N Moore whose telephone number is 703-605-1531. The examiner can normally be reached on M-F: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Vanderpuye can be reached on 703-308-7828. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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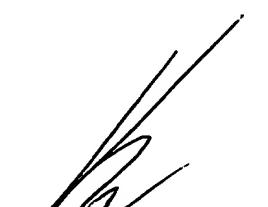
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